Listing of the Claims:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

1-2. Canceled

3. (Currently amended). A systematic modeling methodology for information personalization in an information system which automatically adjusts information content, structure, or presentation to an individual user comprising the steps of:

modeling information-seeking interaction sequences with the information system wherein each interaction sequence denotes a ~~possible~~ dialog between the user and the information system, wherein ~~a~~ the dialog ~~in the step of modeling~~ is a task-oriented information-seeking activity involving ~~a list of information-seeking aspects comprising~~ structural aspects specified by the user, and terminal aspects ~~as responses~~ provided by the information system in response to the specified structural aspects;

programmatically representing the interaction sequences in a computer program, wherein the interaction sequences can be initiated by the user out-of-turn, wherein the representing step includes the following steps a), b), c), and d) ~~of~~:

a) defining a program variable for each structural aspect, called structural variables;

b) defining a program variable for each terminal aspect, called terminal variables;

c) organizing the set of interaction sequences in terms of conditional elements on structural variables, using constructs provided in a programming language;

d) declaring all structural variables to be parameters in the program; and if an interaction sequence produces values for terminal aspects, assigning values for respective terminal variables in corresponding programmatic representation;

~~creating a personalization system by partial evaluation of~~ partially evaluating the computer program, with respect to user input, to produce a

simplified program; and

  generating a personalized information space for the user interface from the simplified program.

4. (previously presented) The systematic modeling methodology for information personalization in an information system recited in claim 3, further comprising the step of compacting interaction sequences to determine a new set of interaction sequences having fewer states prior to the step of programmatically representing the interaction sequences in a computer program.

5. (previously presented) The systematic modeling methodology for information personalization in an information system recited in claim 3, wherein the step of creating a personalization system by partial evaluation of the computer program uses a source-to-source transformation engine that simplifies the computer program for static values of some program variables.

6. (previously presented) The systematic modeling methodology for information personalization in an information system recited in claim 3, wherein the step of generating a personalized information space for the user in a user interface is performed by mapping from the simplified program to the information space, in terms of a technology corresponding to the information system.

7. (previously presented) The systematic modeling methodology for information personalization in an information system recited in claim 3, wherein the information-seeking interaction of the user is by means of a browser.

8. (Original) The systematic modeling methodology for information personalization in an information system recited in claim 7, wherein the user interface is a browser window displaying an information space and a partial input specification window for facilitating user interaction.

9. (Original) The systematic modeling methodology for information personalization in an information system recited in claim 7, wherein the browser

supports a browsing hierarchy, said step of modeling being performed using a nested programmatic model.

10. (Original) The systematic modeling methodology for information personalization in an information system recited in claim 7, wherein the user interface comprises two windows, a first window allowing the user to proceed with an interaction along the lines initiated by the information system and a second window allowing the user to take an initiative and personalize the interaction by specifying some aspect out-of-turn.

11. (previously presented) The systematic modeling methodology for information personalization in an information system recited in claim 3, wherein the user can specify any aspect out-of-turn, further comprising the step of partially evaluating the program with respect to values for structural program variables.

12. (previously presented) The systematic modeling methodology for information personalization in an information system recited in claim 3, further comprising the steps of:

when a user specifies information-seeking aspects, representing the information-seeking aspects as values for structural program variables;

performing a partial evaluation with respect to the structural program variables; and

converting a resulting program back to the information space.

13. (New) The systematic modeling methodology for information personalization in an information system recited in claim 3, further comprising the step of repeating the "partially evaluating" and "generating" steps after every user-computer interaction.

14. (New) A method for computer interaction with a user that supports mixed-initiative interaction between the user and the computer, the method comprising the steps of:

a) employing a computer program to model interaction sequences between the

user and the computer;

b) presenting an information space based on the computer program, and a dialog input mechanism for the user;

c) receiving dialog input from the user via the dialog input mechanism, wherein the dialog input is permitted to be out-of-turn;

d) partially evaluating the computer program with respect to the dialog input received in step (c), and simplifying the computer program based on the partial evaluation; and

e) altering the information space based on the simplified program produced in step (d).

15. (New) The method of claim 14, wherein steps (b), (c), (d), and (e) are performed a plurality of times.

16. (New) The method of claim 14 wherein step (d) is performed every time the user inputs dialog to the computer.

17. (New) The method of claim 14 wherein the user interface comprises two windows, a first window allowing the user to proceed with an interaction along the lines initiated by the information system and a second window allowing the user to take an initiative and personalize the interaction by specifying some aspect out-of-turn, wherein partial evaluation of step (d) is performed on dialog input in the second window.

18. (New) The method of claim 14 wherein the dialog input is off-topic.